

Serial No. 09/637,698
Amdt. dated May 23, 2007
Reply to Office Action of February 6, 2007

Docket No. HI-0006

Listing of Claims

1-13. (Canceled)

14. (Currently Amended) A method of generating multiple scrambling codes in a WCDMA communication system, comprising:

generating a primary scrambling code by setting an initial value of a scrambling code to a binary value of "n" when a n-th one of the plurality of primary scrambling codes is to be generated; and

generating a n-th secondary scrambling code set corresponding to the n-th primary scrambling code by shifting an initial value of the n-th primary scrambling code;

~~wherein an initial value of an m-th secondary scrambling code of the n-th secondary scrambling code set having a plurality of secondary scrambling codes is set using a value obtained after shifting the n-th primary scrambling code by m times~~

wherein setting the initial value comprises:

(a) setting a plurality of temporal primary scrambling codes, the number of the temporal primary scrambling codes being more than the number of the primary scrambling codes;

(b) setting the initial value, adapted to generate a n-th one of the temporal primary scrambling codes, with a value of "n";

(c) calculating respective initial values, adapted to generate the secondary

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scrambling codes in the first one of the secondary scrambling code set, based on the value of "n":

(d) detecting each secondary scrambling code in a secondary scrambling code set that have the same initial value as one of the temporal primary scrambling codes, based on the set and calculated initial values;

(e) discarding the j-th temporal primary scrambling code or a i-th one of the temporal primary scrambling codes when the initial value of an i-th one of the secondary scrambling codes corresponds to that of a j-th one of the temporal primary scrambling codes;

(f) repeatedly executing steps (b) through (e) up to an M-th one of the secondary scrambling code sets; and

(g) selecting as the primary scrambling codes N codes from the remaining temporal primary scrambling codes after executing step (d) for the M-th secondary scrambling code set, and when a j-th one of the finally left temporal primary scrambling codes is selected as an n-th one of the primary scrambling codes, mapping the values of "n" and "j", thereby setting the value of ";" as an initial value adapted to generate the n-th primary scrambling code.

15. (Previously Presented) The method of claim 14, wherein the initial value of the primary scrambling code is set by setting a 7-th and 11-th bit included in the initial value to a value of 1, setting a first through 10-th bits, except for the 7-th and 11-th bits, to a binary expression of "n" including different 8 bits, respectively, and setting remaining ones of the bits, other than the first through 11-th bits, to a value of "0".

16. (Canceled)

17. (Currently Amended) The method of claim 14, wherein generating the primary scrambling codes and n-th second scrambling code set are generating using the following table shown in Figure 7, where the number of primary scrambling codes, N, is 512, and the number of secondary scrambling code sets, M, is 16[[:]].

18. (Currently Amended) The method of claim 14, wherein generating the primary scrambling codes and n-th second scrambling code set are generating using the following table shown in Figure 8, where the number of primary scrambling codes, N, is 512, and the number of secondary scrambling code sets, M, is 16[[:]].

19-23. (Canceled)

24. (Previously presented) The method of claim 14, wherein the primary scrambling code and the secondary scrambling code are generated concurrently.

25. (Previously Presented) The method of claim 14, wherein the primary scrambling code and the secondary scrambling code corresponding to the primary scrambling code are disposed in a two-dimensional code array.